

AMENDMENTS TO THE CLAIMS

Claims 1-10 cancelled.

11. (New) A process for preparing a catalyst composition for olefin polymerization, which comprises preparing a catalyst solid in a first step by bringing

- A) at least one support,
- B) at least one organic compound of formula (II)



where

- A is an atom of main group 13 of the Periodic Table or a partially halogenated or perhalogenated C₁-C₂₀-alkyl- or C₆-C₄₀-aryl group,
 - R⁴ are identical or different and are each, independently of one another, hydrogen, halogen, C₁-C₂₀-alkyl, C₁-C₂₀-haloalkyl, C₁-C₁₀-alkoxy, C₆-C₂₀-aryl, C₆-C₂₀-haloaryl, C₆-C₂₀-aryloxy, C₇-C₄₀-arylalkyl, C₇-C₄₀-haloarylalkyl, C₇-C₄₀-alkylaryl or C₇-C₄₀-haloalkylaryl or an OSiR₃⁵ group, where
 - R⁵ are identical or different and are each hydrogen, halogen, C₁-C₂₀-alkyl, C₁-C₂₀-haloalkyl, C₁-C₁₀-alkoxy, C₆-C₂₀-aryl, C₆-C₂₀-haloaryl, C₆-C₂₀-aryloxy, C₇-C₄₀-arylalkyl, C₇-C₄₀-haloarylalkyl, C₇-C₄₀-alkylaryl or C₇-C₄₀-haloalkylaryl,
 - y is at least 1 and
 - x is an integer from 0 to 41,
 - C) at least one organometallic compound and
 - D) at least one organic transition metal compound
- into contact with one another, then bringing this catalyst solid into contact with

- E) at least one organoaluminum compound of the formula (I)



where

R^1 is C_1 - C_{10} -alkyl, C_6 - C_{15} -aryl, halo- C_1 - C_{10} -alkyl, halo- C_6 - C_{15} -aryl, C_7 - C_{40} -arylalkyl, C_7 - C_{40} -alkylaryl, C_1 - C_{10} -alkoxy or halo- C_7 - C_{40} -alkylaryl, halo- C_7 - C_{40} -arylalkyl or halo- C_1 - C_{10} -alkoxy and

R^2 and R^3 are identical or different and are each, independently of one another, hydrogen, halogen, C_1 - C_{10} -alkyl, C_6 - C_{15} -aryl, halo- C_1 - C_{10} -alkyl, halo- C_6 - C_{15} -aryl, C_7 - C_{40} -arylalkyl, C_7 - C_{40} -alkylaryl, C_1 - C_{10} -alkoxy or halo- C_7 - C_{40} -alkylaryl, halo- C_7 - C_{40} -arylalkyl or halo- C_1 - C_{10} -alkoxy,

in a second step and then using this mixture for the polymerization without further work-up,

wherein the catalyst solid obtained by bringing the components A), B), C) and D) into contact with one another and the organoaluminum compound E) are brought into contact with one another at from -10°C to 80°C for a period of from 0.5 minutes to 10 hours before the reaction product is used for the polymerization.

12. (New) A process for preparing a catalyst composition for olefin polymerization as claimed in claim 11, which further comprises

F) at least one Lewis base

is used in addition to the components A), B), C) and D) for preparing the catalyst solid which is brought into contact with the organoaluminum compound E).

13. (New) A process for preparing a catalyst composition for olefin polymerization as claimed in claim 11, wherein, in the formula (I) of the organoaluminum compound E), R^1 is C_3 - C_{10} -alkyl and R^2 and R^3 are each hydrogen or C_3 - C_{10} -alkyl.

14. (New) A process for preparing a catalyst composition for olefin polymerization as claimed in claim 12, wherein, in the formula (I) of the organoaluminum compound E), R^1 is C_3 - C_{10} -alkyl and R^2 and R^3 are each hydrogen or C_3 - C_{10} -alkyl.

15. (New) A catalyst system for the polymerization of olefins, comprising a catalyst composition prepared as claimed in claim 11.

16. (New) A catalyst system for the polymerization of olefins, comprising a catalyst composition prepared as claimed in claim 14.

17. (New) A catalyst system for the polymerization of olefins as claimed in claim 15 which further comprises

G) at least one further organometallic compound
as scavenger with which the monomers are brought into contact before they come into contact with the catalyst composition.

18. (New) A catalyst system for the polymerization of olefins as claimed in claim 16 which further comprises

G) at least one further organometallic compound
as scavenger with which the monomers are brought into contact before they come into contact with the catalyst composition.

19. (New) A process for the polymerization of olefins which comprises using the catalyst composition prepared from the process as claimed in claim 11.

20. (New) A process for the polymerization of olefins which comprises using the catalyst composition prepared from the process as claimed in claim 14.

21. (New) A process for the polymerization of olefins which comprises using the catalyst system as claimed in claim 15.

22. (New) A process for the polymerization of olefins which comprises using the catalyst system as claimed in claim 18.